

Meetings

Program of the Gordon Research Conferences

The Gordon Research Conferences for 1960 will be held from 13 June to 2 September at Colby Junior College, New London, N.H.; New Hampton School, New Hampton, N.H.; and Kimball Union Academy, Meriden, N.H.

Purpose. The conferences were established to stimulate research in universities, research foundations, and industrial laboratories. This purpose is achieved by an informal type of meeting consisting of scheduled lectures and discussion groups. Sufficient time is available to stimulate informal discussions among the members of each conference. Meetings are held in the morning and in the evening, Monday through Friday, with the exception of Friday evening. The afternoons are available for recreation, reading, or participation in discussion groups, as the individual desires. This type of meeting is a valuable means of disseminating information and ideas to an extent that could not be achieved through the usual channels of publication and presentation at scientific meetings. In addition, scientists in related fields become acquainted, and valuable associations are formed that often result in collaboration and cooperative efforts between different laboratories.

It is hoped that each conference will extend the frontiers of science by fostering a free and informal exchange of ideas among persons actively interested in the subjects under discussion. The purpose of the program is to bring experts up to date on the latest developments, to analyze the significance of these developments, and to provoke suggestions concerning the underlying theories and profitable methods of approach for making progress, rather than to review the known fields of chemistry and physics.

In order to protect individual rights and to promote discussion, it is an established requirement of each conference that no information presented is to be used without specific authorization of the individual making the contribution, whether in formal presentation or in discussion. Scientific publications are not prepared as emanating from the conferences.

Registration and reservations. Attend-

ance at the conferences is by application. Individuals interested in attending the conferences are requested to send their applications to the director at least 2 months prior to the date of the conference. *All applications must be submitted on the standard application form, which may be obtained by writing to the office of the director.* This procedure is important because certain specific information is required in order that a fair and equitable decision on the application may be made. Attendance at each conference is limited to approximately 100 conferees.

The director will submit the names of those requesting authorization to attend to the Conference Committee for each conference. This committee will review the names and select the members in an effort to distribute the attendance as widely as possible among the various institutions and laboratories represented by the applications. A registration card will be mailed as soon as possible to those selected. Advance registration by mail for each conference is required, and registration is completed on receipt of the card and a deposit of \$15. (Checks are to be made payable to the Gordon Research Conferences.) The deposit of \$15 will be credited against the fixed fee for the conference if the individual attends the conference for which he has applied. A registration card not accompanied by the \$15 deposit will not be accepted.

The Board of Trustees of the conferences has established a fixed fee of \$100 for resident conferees at each conference. This fee was established to encourage attendance for the entire conference and to increase the special fund that is available to each conference chairman for the purpose of assisting conferees who attend a conference at total or partial personal expense to meet their travel or subsistence expenses or both. This fixed fee will be charged regardless of the time a conferee attends the conference—that is, for periods of from 1 to 4½ days. It is divided as follows: registration fee, \$40 (\$15 for administration and \$25 for the special fund); room and meals, \$60 (including gratuities) for 5 days. An additional charge of \$1 per night per person will

be made for a room with private bath or for a single room, of which there are only a limited number available. These rooms will be assigned in the order that applications are received. An additional charge will be made for rooms occupied more than 5 nights.

Members attending a conference are expected to live at the conference location because one of the objectives of the conferences is to provide a place where scientists can get together informally for discussion of scientific research of mutual interest. It is to the advantage of all participants to attend a conference for the entire week. When special circumstances warrant a request to live elsewhere, permission must be obtained from the director. If the request is approved, these nonresident conferees will be charged a registration fee of \$50.

The fixed fee will cover registration, room (except room with private bath or single room), meals, and gratuities for resident conferees. It will not provide for golf, telephone, taxi, laundry, conference photograph, or any other personal expenses.

Conferees living at the conference location who will pay all or part of the fixed fee as a personal expense may request a reduction of \$25 (the amount allotted for the special fund) in the fixed fee. Application for this special fee (\$75) must be made when the registration card is returned to the director.

Accommodations are available for wives who wish to accompany their husbands. All such requests should be made at the time the attendance application is submitted because these accommodations, limited in number, will be assigned in the order that specific requests are received. Children 12 years of age and over can be accommodated at the conferences. Pets are not permitted in the dormitories.

Special fund. A special fund is provided for by the Board of Trustees from the registration fee. It is made available to the chairman of each conference for the purpose of increasing the participation of research scientists who could not otherwise attend because of financial limitations. Its use is not limited to scientists who have been invited by the chairman to attend a conference in order to present research results. The money is to be used as an assistance fund only and may be used to contribute toward traveling expenses or subsistence expenses at the conference, or both. Total travel and subsistence expenses will not usually be provided.

Cancellations. The cancellation of an approved application for attendance at a conference will cause forfeiture of the \$15 deposit.

Attendance. Requests for attendance at the conferences, or for additional in-

formation, should be addressed to W. George Parks, Director, Department of Chemistry, University of Rhode Island, Kingston, R.I. From 13 June to 2 September mail should be addressed to Colby Junior College, New London, N.H.

Colby Junior College

Petroleum:

Friction, Lubrication, and Wear

William A. Horne, *chairman*
Cheves Walling, *vice chairman*

13 June. Douglas Godfrey, "Boundary lubrication"; G. V. Vinogradov, "Fundamentals of extreme pressure lubrication."

14 June. George S. Reichenbach, "Friction and ball bearings"; J. M. Bailey, "Plastic and elastic deformations in single crystals."

15 June. R. L. Johnson, "Lubrication at extremely low and extremely high temperatures"; D. G. Flom, "Friction and lubrication of plastics."

16 June. B. G. Rightmire, "Hydrodynamics of lubrication"; R. J. S. Pigott, "Bearings, what are they?"

17 June. John Boyd, "Electrostatic effects in lubrication."

Elastomers: Structure and Properties

R. L. Zapp, *chairman*
Gerard Kraus, *vice chairman*

20 June. F. P. Baldwin and I. Kuntz, "The chemistry of halogenated butyl-preparations and reactions"; P. J. Canterino and G. R. Kahle, "Chlorinated and chlorosulfonated polyolefins"; A. M. Bueche and D. G. Flom, "Rolling friction of elastomers."

21 June. R. W. Andrews, "Internal rotations of polymer molecules under mechanical stresses"; F. J. McGary, "Behavior of elastomers under rapid deformation"; M. Berger, subject to be announced.

22 June. I. Kuntz and Arthur Gerber, "The butyllithium initiated polymerization of 1, 3-butadiene"; C. G. Moore, "Present status of the chemistry of vulcanization of natural rubber"; K. E. Polmanteer, "Influence of organic side groups on the rheological properties of polysiloxanes."

23 June. G. Salomon, "Mechanism of ozone cracking"; A. R. Payne, subject to be announced.

24 June. J. F. Smith and G. T. Perkins, "The vulcanization of fluorocarbon elastomers"; René Chasset, "Electrical properties of vulcanizates."

Nuclear Chemistry

John O. Rasmussen, *chairman*
Ellis P. Steinberg, *vice chairman*

27 June. Beta decay—*experimental and theoretical. Electron conversion line spectroscopy.*

28 June. Radioactive decay scheme studies: P. Axel, "Nuclear isomerism—present-day systematics, selection rules, the Mössbauer scattering technique." Properties of nuclear energy levels in odd nuclei.

29 June. R. K. Sheline, "Energy level systematics and theory for even-even nuclei." Review of significant new developments in nuclear structure theory. W. J. Swiatecki, "New developments in liquid drop fission theory."

30 June. S. G. Thompson, "Spontaneous fission studies: angular and energy distributions of neutrons and evidence for triple fission"; A. C. Wahl, "Nuclear charge distribution in low energy fission"; L. D. Roberts, "Angular distribution of fission fragments from aligned nuclei."

1 July. L. Wilets, "Current status of fission theory."

Polymers

E. M. Fettes, *chairman*
L. A. Wall, *vice chairman*

4 July. H. Mark, "Recent advances in polymer chemistry"; C. G. Overberger, "New polymers and copolymers of α -olefins"; E. F. Cluff, "Relation of structure to properties in urethanes."

5 July. C. G. Moore, "Present status of the chemistry of vulcanization of natural rubber"; W. Scheele, "The kinetics of sulfur-decrease in accelerated and unaccelerated vulcanization of natural rubber and synthetic rubbers"; D. Craig, discussion leader.

6 July. I. M. Ward, "Transition phenomena in polyethylene terephthalate; infrared, x-ray and nuclear magnetic resonance studies"; K. Wolf, "Comparison of experimental results regarding the physical behavior of polyethylene"; F. H. Müller, "Calorimetric measurements with high polymers, especially the detection of irreversible reactions"; R. Buchdahl, discussion leader.

7 July. G. E. Ham, "Expansion of copolymerization theory (influence of neighboring units on radical reactivity with monomers)"; M. Morton, "Homogeneous anionic polymerization"; A. S. Hay, "Polymerization by oxidative coupling."

8 July. G. M. Burnett, "Some novel observations on polymerization in solution."

Textiles

Fred Fortess, *chairman*
H. J. White, *vice chairman*

11 July. A. B. Craig and J. P. Knudsen, "Acrylic fiber structure and properties as a function of coagulation system"; Ian Ward, "Molecular motion in polyethylene terephthalate and related polymers."

12 July. W. F. McDevit, "Structure and properties of polyamide fibers"; H.

Zollinger, "The mechanism of dyeing polyamide fibers."

13 July. H. H. Summers, "The kinetics of dyeing cellulosic fibers with reactive dyes"; Z. A. Rogowin, "New methods of modification of cellulose fiber properties."

14 July. D. D. Gagliardi, "Different behavior of cotton, modified cotton and rayon in new crosslinking reactions"; Ludwig Rebenfeld, "Effect of cotton fiber structure on response to chemical treatments"; Verne W. Tripp and Rollin S. Orr, "Morphological differences in fine structure of cotton fibers."

15 July. C. E. Reese, "The relationship of fiber and fabric properties to wash and wear performance of poly fibers."

Corrosion

Milton Stern, *chairman*
Morris Cohen, *vice chairman*
Electrode Kinetics of Dissolution Processes

18 July. M. Cohen, *chairman*: L. H. Jenkins, "Observations on surface structures of copper single crystals undergoing aqueous dissolution"; M. Nagayama, "The nature of the passive film on iron in neutral solution"; F. A. Posey, "Potentiostatic and galvanostatic studies on passive stainless steel"; N. D. Greene, "Some recent studies of corrosion and passivity"; S. Barnartt, "Anodic reactions of stainless steels during stress corrosion cracking."

19 July. M. Stern, *chairman*: A. C. Makrides, "Cathodic processes in alkaline solution"; J. M. Kolotyrkin, "Influence of anions on the dissolution kinetics of metals"; G. H. Cartledge, "Effects of iodide ions and other inhibitors in the polarization of iron"; J. O'M. Bockris, "The mechanism of the dissolution of iron"; T. P. Hoar, "Dissolution kinetics of the iron group elements and their alloys—annealed strained and yielding."

20 July. J. F. Dewald, *chairman*: J. F. Dewald, "Analogies and distinctions between semiconductor and metal electrodes"; H. Gerischer, "Corrosion behavior of germanium as an example for semiconductor corrosion"; W. W. Harvey, "Chemisorption and semiconductor properties of germanium electrode surfaces"; W. Mehl, "The effect of hydrofluoric acid on the mechanism of anodic dissolution of germanium in sulphuric acid"; W. H. Brattain, "Observations on electrolytic processes at a germanium surface."

21 July. J. V. Petrocelli, *chairman*: H. Kaesche, "Mechanism of anodic pitting of aluminum"; C. Edeleanu, "Anodic polarization effects on aluminum"; L. Young, "Anodic oxide films on tantalum and zirconium"; N. D. Tomashou, "The corrosion and passivity of titanium"; J. B. Cotton, "Formation

and breakdown of anodic films on titanium."

22 July. C. Edeleanu, *chairman*: E. L. Koehler, "Application of electrochemical methods to the corrosion of can-making metals in food-acid media"; J. D. Sudbury, "Anodic passivation studies."

Separation and Purification

John E. Powers, *chairman*

Harry P. Gregor, *vice chairman*

25 July. Karl Kammermeyer, "Report on recent separation research in Europe"; Robert E. Anderson, "Separations with ion exchange resins. A broadening field"; F. O. Mixon and R. L. Pigford, "Boundary layer suction techniques applied to thermal diffusion."

26 July. I. A. Eldib, "Foam and emulsion fractionation"; M. Tayyabkhan and R. R. White, "Mass transfer and chemical reaction in beds of ion exchange resins"; H. Schildknecht, "New developments in zone melting including application to organic materials, micro-techniques, techniques at low temperatures, etc."

27 July. R. K. Finn, "Large scale electrophoresis"; G. H. Dale, "Development of continuous countercurrent crystall purification columns."

28 July. H. Schildknecht, "The crystallization column; a new device for fractional crystallization from the melt"; L. H. Tung, "Fractionation of high polymers"; H. G. Cassidy, "Electron exchange polymers: challenge to the development of new and novel separation and purification techniques."

29 July. Alexander Kolin, "Application of combined electric and magnetic fields to fractionation problems"; Arthur Karler, "Electrochromatography: a continuous processing system as applied to the full range of ionic to non-ionic feed stocks."

Instrumentation

Paul C. Hoell, *chairman*

J. M. Vandenberg, *vice chairman*

1-5 Aug. *Invited papers*: Jacob Rabnow, "Instrumentation and automation for the post office"; A. F. Sperry, "On-line analysis of chemical processes"; N. B. Nichols, "Impressions of Russian instrumentation"; Robert H. Kohr, "Application of computers to automobile ride and steering problems"; F. Gaynor Evans, "Instrumentation for stress-strain analysis of anatomical structures"; John L. Harned, "Dynamic power control through friction contacts"; Arthur Karler, "Continuous flow electrophoresis by curtain and cell type instrument."

Contributed papers: Malcolm D. Ross, "High altitude balloon research"; E. F. Corwin, "High altitude instrumentation"; L. J. Fogel, "Levels of in-

telligence in automata"; J. H. Laub, "Gas-lubricated spherical bearings"; Karl C. Kessler, "The use of atomic wavelengths for precision length measurements"; J. M. Vandenberg, "Absorbance measurements of perforated screens"; W. Wildhack, "Temperature measurement with a pneumatic gauge"; M. Irland, "An absolute reflectance attachment with variable angle of incidence"; Lloyd Slater, "Research proposals in instrumentation"; Enoch J. Durbin, "The calculation of obscure dynamic cause and effect relationships using analog computer techniques."

Food and Nutrition

David B. Hand, *chairman*

J. C. Bauernfeind, *vice chairman*

8 Aug. F. J. Butt, "The use of a chelating agent in food processing"; D. A. M. Mackay, "Characterization of flavors by gas chromatography"; R. Thiessen, Jr., "Radioactive tracers for screening new food additives for safety"; B. L. Oser, "The new regulatory control of food additives."

9 Aug. W. N. Pearson, "Correlation of biochemical measurements with other parameters of nutritional status"; I. C. Plough, "Correlation of clinical observations with nutritional status"; D. M. Hegsted, "Interpretive guides for nutritional appraisal"; Dorothy F. Hollingsworth, "Dietary survey techniques and interpretation."

10 Aug. A. E. Harper, "Amino acid imbalance"; J. B. Longenecker, "Amino acids in blood plasma as an indication of biological value proteins"; Milton Winitz, "Use of water-soluble, chemically defined diets in studies of non-essential amino acids and in vivo metabolic processes"; K. J. Carpenter, "Food technology and the availability of dietary amino acids."

11 Aug. R. E. Olson, "Evidence for the prevention of atherosclerosis in man by dietary means"; G. V. Mann, "Lack of evidence for the prevention of atherosclerosis in man by dietary means"; B. S. Platt, "Experimental production of severe protein malnutrition."

12 Aug. O. S. Privett, "Effect of processing on the property of dietary fats"; J. G. Coniglio, "Nutritional and metabolic effects of radiation."

Medicinal Chemistry

Irwin H. Slater, *chairman*

Cornelius K. Cain, *vice chairman*

15 Aug. Werner Kalow, "Effect of genetic variation on drug responsiveness"; D. K. de Jongh, "Factors influencing blood levels after oral administration of drugs"; George Karreman, "Electronic aspects of biological active compounds."

16 Aug. Andres Goth, "Relation of carbohydrate metabolism to inflamma-

tion"; V. W. Adamkiewicz, subject to be announced.

17 Aug. *Synthetic antibacterial agents*: Mary F. Paul, "Nitrofurans"; Earl H. Dearborn, "Sulfonamides." *Oleandomycin*: Francis A. Hochstein, "Chemical structure"; Walter D. Celmer, "Structure-activity correlations."

18 Aug. *Mescaline and related compounds*: Richard D. Morin, "Synthetic methods"; Leland C. Clark, Jr., "Pharmacology"; Irving H. Leopold, "The pharmacological struggle against ocular disease."

19 Aug. Paul Janssen, "Piperidine derivatives with analgesic and neuroleptic properties"; Arnold Friedman, "Pharmacological approaches to the treatment of headache."

Catalysis

Herman Pines, *chairman*

C. J. Plank, *vice chairman*

22 Aug. P. H. Emmett, "Report of the second International Congress in Catalysis"; R. E. Van Nordstrand, "X-ray absorption edges for the study of catalysts"; Myron L. Bender, "Homogenous catalysis of the reactions of carboxylic acid derivatives."

23 Aug. S. Siegel, "Stereochemistry and the mechanism of hydrogenation of cyclo-olefins"; A. S. Hussey, "Stereochemistry and hydrogenation of cyclo-olefins. An insight to the mechanism"; P. Swietering, "The mechanism of the ammonia synthesis over iron catalysts."

24 Aug. R. J. Cvetanovic, "Catalytic reactions of butenes"; J. B. Peri, "Adsorption and reaction of butenes and other molecules on gamma-alumina"; J. E. Germain, "Reactions of some naphthenes on supported platinum catalysts."

25 Aug. C. D. Prater, "Kinetic studies of some heterogenous catalytic reactions"; G. S. John, "Continuous flow stirred tank reactions: useful tool in studies of catalytic kinetics"; W. K. Hall, "Studies of the silica-alumina surface."

26 Aug. P. H. Lewis, "The effect of oxygen adsorption on the K x-ray absorption edge of alumina supported nickel."

Cancer

Philippe Shubik, *chairman*

Chester M. Southam, *vice chairman*

29 Aug. *Liver carcinogenesis*: Emmanuel Farber, "Studies with ethionine"; Peter Magee, "Experimental pathological and biochemical studies with dimethylnitrosamine"; John B. Cramer, J. A. Miller, E. Miller, "Studies on the N- and ring hydroxylation of 2-acetylaminofluorene"; Tore Hultin, "Metabolic effects of liver carcinogens and related agents in model experiments"

of short duration"; J. D. Judah, "A general mechanism of liver injury."

30 Aug. *Endocrine carcinogenesis*: Howard A. Bern and Satyabrata Nandi, "The present status of the hormonal influence in mouse mammary tumorigenesis"; Thomas L. Dao, "Hormonal aspects of mammary carcinogenesis by 3-methylcholanthrene in rats"; Henri Isler, "Thyroid tumors with the normal cell populations of the thyroid." *Skin carcinogenesis*: R. K. Boutwell, "The development and use of mice bred for susceptibility and resistance to tumor induction"; Albert Tannenbaum, "Studies on skin carcinogenesis."

31 Aug. *Viruses* (Hilary Koprowski, chairman): Richard E. Shope, "Speculations concerning the mode of action of rabbit papilloma virus"; Leo Sachs, "Studies on the mechanisms of mammalian viral carcinogenesis"; Lloyd Law and Clyde Dawe, "Studies with parotid tumor virus"; M. J. Kopac, "Microsurgical studies on nucleoli of normal and malignant cells"; Michael Abercrombie, "Contact inhibition in tissue culture."

1 Sept. *Metastasis* (Chester M. Southam, chairman): Irving Zeidman, "The mechanics of the spread of cancer"; H. S. N. Greene, "The inhibitory influence of transplanted hamster lymphoma on metastasis"; Sumner Wood, "Role of vascular endothelium in tumor metastasis"; Renato Baserga, "Establishment and growth of tumor metastases, studied by the use of tritiated thymidine"; T. P. Morley, "The recovery of tumor cells from the blood in cases of cerebral glioma"; Warren H. Cole, "Clinical problems of tumor metastasis"; Bernard Fisher and Edwin Fisher, "Studies on hepatic metastasis"; Gabriel Gasic, "Cement substances in metastasizing and nonmetastasizing transplantable tumors in mice."

2 Sept. Rene Truhaut, "Evaluation of carcinogenic activity in food additives"; Robert E. Eckardt, "Occupational cancer."

Chemistry of Coal

John S. Mackay, chairman
Richard A. Glenn, vice chairman

13 June. *The coking process—petrography and the coking mechanism*: M. Schapiro; R. J. Gray; W. Spackman; W. Berry.

14 June. *The coking process—new processes*: Everett Gorin; Joseph Work; R. T. Joseph. *Carbon—physical structure*: J. A. Robertson; N. Rice.

15 June. *Carbon—chemical structure*: (speakers and subjects to be announced). *Carbon—structure and surface chemistry*: Jules V. Hallum.

16 June. *Commercial carbons—special properties*: (speakers and subjects to be announced). *Mineral constituents*: (speakers and subjects to be announced).

17 June. *Summary—coal preparation*: Richard A. Glenn. Programming the next conference.

Information Processing for Critical Tables of Scientific Data

Guy Waddington, chairman
Bruno J. Zwolinski, vice chairman

20 June. P. W. Bridgman, "Critique of critical tables"; F. D. Rossini, "The story of the *International Critical Tables*"; K. H. Hellwege, "Evolution of the Landolt-Börnstein Tabellen."

21 June. Guy Waddington, "The search for new patterns"; B. J. Zwolinski, "The operation of an integrated data project"; Carl F. Kayan, "Toward a simplification of our unit systems." Panel discussion: The symbolic language of science (panelists to be selected).

22 June. D. M. Newitt, "An engineer looks at scientific data"; J. P. McCullough, "From pre-research to finished tables"; E. J. Crane, "Problems of indexing and ordering."

23 June. Ray Pepinsky, "Literature imaging and property correlations"; J. Hilsenrath, "The role of the digital computer in preparing critical tables"; W. J. Youden, "The enduring values."

24 June. Discussion: Ideal project patterns (discussion leaders to be announced). Discussion: Needs and coordination (A. V. Astin, discussion leader).

Proteins and Nucleic Acids

Robert Sinsheimer, chairman
John Edsall, vice chairman

27 June–1 July. *Enzyme synthesis during bacteriophage infection*: S. Zimmerman; L. Pizer; J. Koerner; M. Bessman; R. Greenberg. *Biologically active nucleic acids*: H. Schuster; J. Marmur; D. Hogness; D. Kaiser. *DNA structure and synthesis*: L. Cavalieri; M. Meselson; J. Adler; F. Bollum; R. Smellie; G. Khorana. *RNA synthesis in vivo*: H. Harris; L. Goldstein. *Soluble RNA, ribosomes, and protein synthesis*: P. Berg; A. Tissieres; H. Dintzis; R. Holley; M. Stephenson. *Chemical mutation of DNA and RNA*: S. Benzer; E. Freese; I. Tessman; D. Krieg; G. Stent. *Correlation between genetic fine structure and protein structure*: W. Dreyer; C. Levinthal; S. Brenner. *Sequence studies in nucleic acids*: K. Burton; J. Josse; K. Reddi.

Chemistry and Physics of Isotopes

Ralph E. Weston, Jr., chairman
Arthur N. Bourns, vice chairman

4–8 July. *Biochemical and biological aspects of deuterium isotope effects* (J. J. Katz, chairman): J. J. Katz; D. Kritchevsky; H. L. Crespi. (Subjects to be announced.) *Isotope separation* (W.

Spindel, chairman): G. M. Begun and W. H. Fletcher, "Isotope separation factors in nitrogen systems"; A. A. Palko and J. S. Drury, "Isotope fractionation in BF₃ systems"; G. Zippe, "A simple short bowl centrifuge for U isotope separation"; S. V. Ribnikar and J. Bigeleisen, "Distillation of isotopic isomers"; G. R. Grove and W. J. Haubach, Jr., "Thermal diffusion studies." *Isotope effects on the equation of state of condensed phases* (J. Bigeleisen, chairman): T. F. Johns; D. White; E. N. Lassettre; S. G. Sydorik. (Subjects to be announced.) *Isotope abundance measurements in geochemistry* (T. C. Hoering, chairman): M. Williams, "Isotope abundances in carbonate rocks"; S. Epstein, "Oxygen isotopes in silicate rocks"; H. Thode, "Sulfur isotope geochemistry"; W. Eckelman, "Stable carbon isotopes in recent sediments"; B. Benson, "Isotopic analyses of nitrogen and oxygen in natural systems"; R. Jensen, "Sulfur isotopes in ore minerals"; T. C. Hoering, "Nitrogen and chlorine isotopes in nature. Carbon isotopes in photosynthesis." *Secondary hydrogen isotope effects* (E. S. Lewis, chairman): V. J. Shiner, Jr.; E. A. Halevi; A. Streitwieser, Jr. (Subjects to be announced.) *Kinetic isotope effects in reaction mechanism studies* (A. Fry, chairman): L. Melander, "Hydrogen isotope effects in electrophilic aromatic hydrogen exchange"; G. Ropp, "Isotope effects in reactions of formic acid"; F. Westheimer, "Investigations of the chemistry of phosphate esters with O¹⁸"; P. Yankwich, "Isotope fractionation in C–O bond formation"; K. Wiberg, "Isotope effects in oxidation reactions"; E. M. Hodnett, "Isotope effects in polymerization reactions." Brief reports on work in progress (R. E. Weston, Jr., chairman): papers may be submitted at the beginning of the conference.

Statistics in Chemistry and Chemical Engineering

G. E. P. Box, chairman
Carl Bennett, vice chairman

11 July. Sigurd L. Andersen, "Economics of process and products development"; D. W. Behnken, "Some new designs at three levels."

12 July. Churchill Eisenhart, "Accuracy and precision"; Joseph V. Kelly, "Particle size distributions by extreme value theory."

13 July. Stanley Katz, "Time series and chemical process transfer functions"; Malcolm E. Turner, "Analysis of causal paths."

14 July. R. N. Curnow, R. J. De-Gray, J. S. Hunter, "Screening experiments"; J. Chamnugam, "Automatic optimization."

15 July. A. Baines, "Experiences in process development methods."

Radiation Chemistry

Max S. Matheson, *chairman*
John L. Magee, *vice chairman*

18 July. *The observation of intermediates in radiolysis* (F. P. Hutchinson, *chairman*): J. W. Boag, "U.V. absorption spectroscopy of irradiated liquids"; R. L. McCarthy and A. MacLachlan, "Transient species produced by high-energy electron radiation." *Special processes in radiation chemistry* (K. J. Laidler, *chairman*): H. J. Gombert, "Resonances in radiation effects"; V. Cermak, "Ion molecule reactions in inorganic gases and gaseous mixtures."

19 July. *Radiation chemistry at low temperatures* (T. H. Anderson, *chairman*): J. M. Flournoy, "Some observations of the disappearance of trapped radicals in irradiated solids at low temperatures"; Russell Johnsen, "Photolysis of free radicals produced by ionizing radiation." *Radiation-induced decomposition of crystalline solids* (Everett Johnson, *chairman*): J. Cunningham, "Mechanism of the γ -radiolysis of crystalline nitrates."

20 July. *Vacuum ultraviolet photochemistry* (F. F. Marmo, *chairman*): W. Groth, subject to be announced; B. Steiner, C. F. Giese, and M. G. Inghram, "The photoionization of molecules and the kinetics of their unimolecular dissociation." Open session for recent work.

21 July. *Behavior of electrons in condensed organic phases* (J. L. Magee, *chairman*): O. H. LeBlanc, Jr., "Electronic transport in organic solids and liquids"; R. S. Alger, "Electron properties in rigid organic compounds." *Effect of ionizing radiations on catalysts* (E. H. Taylor, *chairman*): M. Haissinsky, "Action of ionizing radiations on adsorption and catalysis."

22 July. *Radiation chemistry of aqueous systems* (A. O. Allen, *chairman*): C. Vermeil, "Radiation chemistry of aqueous solutions of benzoquinone and quinol"; H. Schwarz, "Absolute reaction rates of free radicals in water radiolysis."

Organic Reactions and Processes

William J. Bailey, *chairman*
Harold E. Zaugg, *chairman-elect*

25 July. W. Keith Langdon, "Preparation of heterocyclic amines by cycloamination"; John W. Lynn and Richard L. Roberts, "1,2,4-Butanetricarboxylic acid and derivatives"; Philip S. Skell, "The chemistry of divalent carbon."

26 July. Charles G. Overberger, "New reactions of 1,1-Di-substituted hydrocarbons"; N. B. Lorette, "The alkylation of ketones"; Robert F. Hudson, subject to be announced.

27 July. William C. Smith, "Fluorina-

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tion with sulfur tetrafluoride"; A. John Speziale and R. C. Freeman, "Synthesis and reactions of chloroenamines"; George Wittig, "Ylid reactions."

28 July. Harold Hart, "Chemistry of multicharged carbonium ions"; George B. Payne, "Oxidation and epoxidation with hydrogen peroxide and nitriles"; Melvin S. Newman, "Reactions of 2,5-cyclohexadienones containing trichloromethyl groups."

29 July. Calvin F. Stevens, "Epoxyethers."

Steroids and Other Natural Products

George Büchi, *chairman*

1-5 Aug. A. R. Battersby, "Researches on alkaloid biogenesis"; A. Brossi, "Total synthesis of an antibiotic"; E. J. Corey, "Recent work on terpenes"; T. G. Halsall, "Some researches in polyisoprenoid chemistry"; O. Jeger, "Some novel transformations of steroids"; J. Meinwald, subject to be announced; H. Muxfeldt, "Syntheses in the tetracycline series"; R. Pappo, "The chemistry of some 18-oxygenated steroids derived from conessine"; speaker to be announced, "Syntheses in the corticosteroid series"; H. Smith, "Some new total syntheses of oestrone and oestrone analogues"; G. Stork, subject to be announced; B. Witkop, "Chemical methods for the cleavage and modification of peptides and proteins"; R. B. Woodward, subject to be announced; H. Conroy, "The structure of echitamine."

Organic Coatings

S. Gusman, *chairman*
G. G. Schurr, *vice chairman*

8 Aug. C. A. Kumins, "Diffusion of gases and vapors through pigmented and unpigmented vinylfilms — glass transition effects"; E. G. Bobalek, "Inferences regarding polymer structure and properties from solubility studies."

9 Aug. J. Gaynor, "Fluidized bed coating"; Claus Victorius, "Organosol finishes from acrylic two-stage emulsion copolymers."

10 Aug. Raymond R. Myers, "The rheology of film curing"; J. C. Petropoulos, "Thermosetting acrylic coating resins."

11 Aug. John W. Swanson, "Some research problems in the coating of paper"; A. E. Rheineck, "The chemistry and technology of polyvinyl drying oil fatty acid esters."

12 Aug. W. H. Slabaugh, "Adsorption and pore volumes of unsupported organic films as related to filiform corrosion processes."

Analytical Chemistry

Charles N. Reilley, *chairman*
Sidney Siggia, *vice chairman*

15 Aug. Howard V. Malmstadt, "Transducers in analytical instrumentation"; Donald D. DeFord, "Computer amplifiers in analytical instrumentation."

16 Aug. F. W. McLafferty and Seymour Meyerson, "Determination of structures of organic compounds by mass spectrometry"; David Hume, "Flame photometry."

17 Aug. J. Howard Purnell, "Recent developments in the theory and practice of gas chromatography." Open discussion.

18 Aug. D. H. Wilkens, "Modern analysis of alloys by wet procedures"; Robert Kunin, "New developments in ion exchange materials of analytical interest."

19 Aug. Petr Zuman and Stanley Wawzonek, "Organic polarography."

Inorganic Chemistry

Charles P. Haber, *chairman*
Helmut M. Haendler, *vice chairman*

22-26 Aug. *Inorganic halogen chemistry* (Peter Girardot, *chairman*): Viktor Gutmann, "Ionic equilibria and coordination phenomena in halides and oxyhalides"; Alexander Popov, "Halogen charge-transfer complexes"; Milton Blander, "Interpretation of association constants in molten reciprocal salt systems"; Benson Sundheim, "Chloride melts." Light metal hydrides (T. R. P. Gibb, Jr., *chairman*): Anton B. Burg, "Some unsolved problems concerning the boron hydrides"; Robert W. Parry, "Werner's coordination theory and hydride chemistry"; William H. Klemperer, "The structure of gaseous group I hydrides"; Olgierd J. Klejnot, "Some results in the hydride chemistry of boron and silicon"; Manley W. Mallett, "Light metal alloy hydrides"; William L. Jolly, "The volatile hydrides of group IV and V"; William M. Mueller, "Survey of light metal hydrides"; John O. Ruff, "Preparation and reactions of amine complexes of AlH_3 "; Thomas Wartik, "Some properties of solvated aluminum hydride." *Recent highlights*

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of inorganic chemistry in Europe; Hans Jonassen. *Phosphorus-nitrogen and phosphorus sulfur chemistry* (G. Barth-Wehrenalp, chairman): N. L. Pad-dock; R. Shaw; M. Becke-Goehring; T. Moeller; R. Raetz. (Subjects to be announced.)

Adhesion

Harold F. Wakefield, *chairman*
Robert L. Patrick, *vice chairman*

29 Aug. J. J. Bikerman, "The science of adhesive joints"; F. J. Reil, "Degrada-tion of adhesive joints through heat or aging"; G. R. Irwin, "Mechanism of failure."

30 Aug. F. R. Eirich, "Adsorption of adhesives on surfaces"; W. T. M. John-son, "Adhesion and the chemical na-ture of surfaces."

31 Aug. H. E. Farnsworth, "Investi-gations with atomically clean surfaces"; C. A. May and A. C. Nixon, "Rela-tion between resin composition, physi-cal properties, and bond strength."

1 Sept. John W. Swanson, "Factors which affect adhesion of cellulose fibers." Open session on current prob-lems in adhesion research (John W. Rutzler, discussion leader).

2 Sept. D. V. Rosato, "Science of adhesion through ceramic and inor-ganic compounds."

Kimball Union Academy

Lipide Metabolism

Carleton R. Treadwell, *chairman*
Jules Hirsch, *vice chairman*

13 June. Cellular aspects of absorp-tion and uptake: Robert M. O'Neal, W. Stanley Hartroft, Wilber A. Thomas, "Electron microscopic studies of lipids in rats fed high-fat diets and single fatty meals"; John Glover, "Intestinal ab-sorption of lipids"; Cecil Entenman and Robert E. Kay, "The uptake, syn-thesis and release of lipids by the iso-lated perfused liver"; N. R. Diluzio, "Hepatic cell participation in lipid metabolism."

14 June. *Lipide metabolism*: Edward J. Masoro, "A study of the regulation of lipide metabolism by experimentally varying the nutrition and environment of a mammal"; Daniel Steinberg and Martha Vaughan, "Adipose tissue metabolism and its control by hor-mones"; W. L. Gaby, Ihor Zajac, Ron-ald Silberman, "The role of phospho-lipids in metabolism." *Sterol metabo-lism*: R. G. Langdon, "Branched chain acids in biosynthesis of cholesterol"; George Popjak, "The intermediary stages of sterol biosynthesis in the liver."

15 June. *Sterol metabolism*: Peter D. Klein, "Studies on the metabolism of cholesterol esters"; James L. Gaylor, " Δ^7 -cholestenol and related compounds in skin"; R. B. Clayton and Konrad

Bloch, "The utilization of sterols in in-sects." *Sterols and bile acids*: Paul F. Smith, "Uptake and utilization of sterols by pleuropneumonia-like organisms"; James G. Hamilton, "Quantitative and qualitative determination of bile acids by glass paper chromatography."

16 June. *Bile acids*: Ezra Staple, "The conversion of cholesterol to bile acids: in vitro studies"; S. Bergstrom, "The conversion of cholesterol to bile acids: stereochemical and quantitative as-pects"; Liese L. Abell, "Hormonal fac-tors in the metabolism of sterols to bile acids"; S. L. Hsia and John T. Matschiner, "Isolation and identifica-tion of new metabolites of bile acids"; Robert B. Failey, Jr., "Some aspects of bile acid metabolism in man."

17 June. *Complex lipids*: H. E. Car-ter, "Chemistry of cerebrosides and other glycolipids"; Andrew A. Benson, "Lipid structure and metabolism in photosynthetic tissues"; L. P. Zill and E. A. Harmon, "Biochemical studies of plant lipids."

Cell Structure and Metabolism

S. L. Palay, *chairman*
G. E. Palade, *vice chairman*

20 June. *Synthesis of secretory products, especially enzymes and pro-teins as exemplified in the pancreas* (G. C. Hirsch, chairman): G. E. Palade; P. Keller; L. E. Hokin; L. C. U. Junqueira; H. Sheldon.

21 June. *Synthesis of secretory prod-ucts in liver and other glands*: T. Peters; R. W. Hendler; E. Kuff; W. Bargmann.

22 June. *Secretion of ions and water* (R. E. Davies, chairman): A. Seder; W. S. Rehm; R. D. Wright; G. D. Pappas.

23 June. *Endocrine glands* (E. Schar-rer, chairman): S. L. Wissig; S. Woll-man, C. P. Leblond; J. Roche, W. H. McShan.

24 June. *Secretion by mucoprotein-producing glands*: D. W. Fawcett; S. L. Palay; Sir Howard Florey.

Additional speakers and discussions to be announced.

Physical Metallurgy

R. L. Fullman, *chairman*
Michael Bever, *vice chairman*

27 June-1 July. R. D. Seraphim, "Effect of impurities and defects in superconductors"; A. W. Overhauser, "Theory of resistance minimum in di-lute paramagnetic alloys"; W. B. Pear-son, "Interpretation of relative thermo-electric phenomena in pure metals and dilute alloys at low temperatures"; P. A. Flynn, "Deformation of solid solutions"; D. A. Thomas, "Influence of grain size on deformation"; J. Kruger, "Relation-ship between surface orientation and film formation in aqueous solutions"; F. W. Young, "Mechanism of disloca-tion etch pitting"; D. A. Vermilyea,

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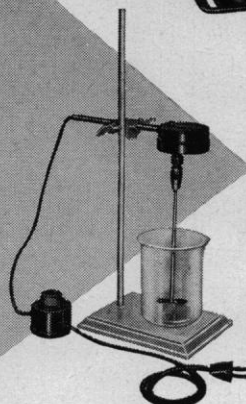
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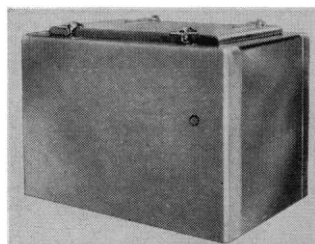


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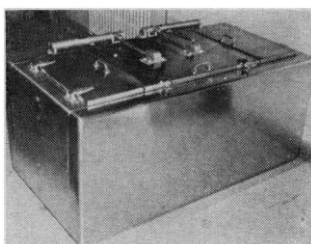
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"Electrodeposition and defect structure"; J. E. Dorn, "Shock loading"; J. W. Nutting, "Dispersions and creep"; W. W. Smeltzer, "Oxidation characteristics of zirconium, titanium and hafnium"; B. Wagner, "Oxidation of metals in carbon monoxide-dioxide mixtures"; W. A. Backofen, "Ductile fracture"; T. L. Johnston, "Brittle fracture"; D. O. Smith, "Anisotropy of thin magnetic films"; D. S. Rodbell, "Ferromagnetic resonance studies of whiskers and particles"; S. Chikazumi, "Roll magnetic anisotropy"; E. A. Nesbitt, "Magnetic annealing in the permalloys and permalvars"; A. Arrott, "Ferromagnetism and antiferromagnetism in alloys"; C. A. Neugebauer, "Some properties of evaporated metal films"; A. J. Forty, "Corrosion cracking."

Chemistry at Interfaces

Herman E. Ries, Jr., *chairman*
Ralph A. Beebe, *vice chairman*

4 July. *Thermodynamics of interfaces* (L. E. Copeland, *chairman*): T. F. Young, "Thermodynamics of surfaces of electrolytic solutions"; L. Ter Minasian-Saraga, "Ionized monolayers and their free electrical energy"; A. V. Kiselev, "The energy of adsorbate-adsorbent and adsorbate-adsorbate interactions in monolayers on solid surfaces."

5 July. *Dispersed systems* (H. van Olphen, *chairman*): Robert Ullman, "Light scattering methods in the investigation of surface structure"; C. T. O'Konski, "Electrical properties of dispersed systems"; J. T. G. Overbeek, "The influence of the relaxation effect in electrophoresis and other electrokinetic phenomena."

6 July. *Monolayers* (H. J. Trurnit, *chairman*): F. M. Fowkes, "Monolayers as two-dimensional solutions"; G. L. Gaines, Jr., "Some cooperative interactions in monolayers"; N. K. Adam, "Developments in monolayer research."

7 July. *Monolayers* (F. H. Healey, *chairman*): G. E. Boyd, "Theories of the liquid expanded state in monolayers: an experimental study"; Ira Blei, "A study of protein-detergent interaction by monolayer penetration"; Paul Becher, "The effect of surface active agents on the properties of the oil-water interface"; B. V. Derjaguin, "The mechanism of the controlling role of monolayers on the kinetics of some processes in heterogeneous systems."

8 July. Related topics and general discussion.

Chemistry, Physiology, and Structure of Bones and Teeth

B. B. Migicovsky, *chairman*
W. P. Norris, *vice chairman*

11 July. *Selected communications* (Clayton Rich, *chairman*): W. P. L. Myers and W. Lawrence, Jr., "Studies

on the influence of cortisone on serum calcium homeostasis"; C. A. L. Bassett, "Factors contributing to osteogenesis in vitro"; T. W. Speckman and W. P. Norris, "Variations in retention kinetics of bone seeking isotopes"; J. Samachson and H. Spencer, "Comparison of single and multiple doses of Sr^{85} and Ca^{45} in man"; J. M. Janes, P. J. Kelly, L. F. A. Peterson, "The effect of beryllium on bone, a morphologic study of the progressive changes in rabbit bone." *Bone induction* (Leroy Lavine, chairman): J. S. Nicholas, "Induction and its relationship to bone structure"; M. Moss, "Osteogenic induction factors."

12 July. *Bone induction (continued)* Leroy Lavine, chairman: J. J. Pritchard, "Recruitment of osteoblasts relating to bone induction"; Hans Selye, "Induction of bone by tissue scaffoldings." *Nature and mechanism of hard tissue destruction* (Reidar F. Sognnaes, chairman): N. M. Hancox, "The osteoclast."

13 July. *Nature and mechanism of hard tissue destruction (continued)* (Reidar F. Sognnaes, chairman): Charles M. Dowse and William Neuman, "Metabolism of bone cells"; George Nichols, Jr., Nancy Nichols, André B. Borle, Stein Schartum, Gilbert Vaes, "Cellular metabolism of bone"; Paul Goldhaber, "Further observations on experimental bone resorption in tissue culture." *Organic matrix in calcification* (M. J. Glimcher, chairman): F. Pautard, "The nature of the organic matrix and its role in the development of calcified structures."

14 July. *Organic matrix in calcification (continued)* (M. J. Glimcher, chairman): L. Johnson, "Histochemical changes in organic matrix accompanying calcification"; A. Sobel, "Role of the organic matrix in the nucleation and growth of bone crystals." *Calcium metabolism* (F. McLean, chairman): J. Vincent, "Metabolic bone at the histological level."

15 July. *Calcium metabolism (continued)* (H. F. Deluca, chairman): A. M. Shanes, "Movement of calcium in non-skeletal tissues"; M. R. Urist, "Calcium and protein relations in the blood"; R. H. Wasserman, "Passage of calcium across biological membranes."

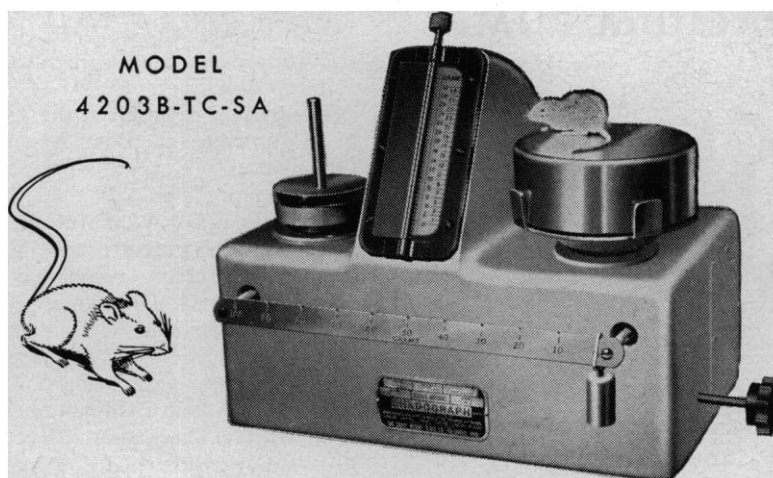
High Pressure Research

H. G. Drickamer, chairman
O. L. Anderson, vice chairman

18 July. R. H. Wentorf, Jr., chairman: H. T. Hall and F. P. Bundy, "The synthesis of diamond." W. H. Jones, chairman: I. S. Bengelsdorf, "Behavior of organic compounds at high temperature and pressure"; I. B. Johns, "Organic reactions at high pressure."

19 July. J. M. Nielsen, chairman: R. Laudise and R. Roy, "Hydrothermal and related syntheses"; U. O. Hutton,

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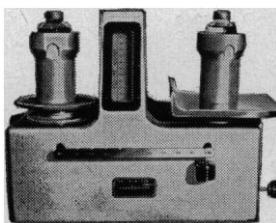
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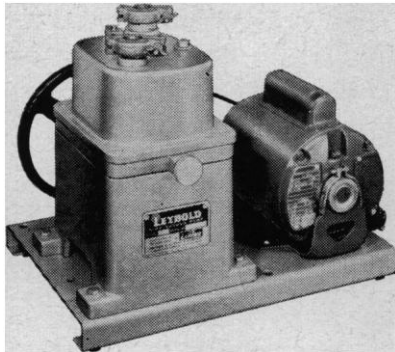
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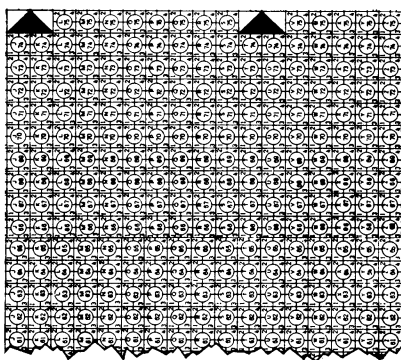
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Specialists in Imported Equipment

D. T. Griggs, A. A. Giardini, "New high pressure techniques and experiments."

20 July. F. B. Bundy, *chairman*: H. M. Strong, L. Coes, F. Birch, "Phase transitions at high pressure." John Jamieson, *chairman*: D. T. Griggs, "Geophysical research at the University of California at Los Angeles"; H. Greenwood, "Recent work on compressed gases."

21 July. D. W. McCall, "NMR studies at high pressure"; W. M. Walsh, Jr., "High pressure resonance work at Harvard." H. G. Drickamer, *chairman*: G. W. Johnson and R. E. Batzel, "The physical and chemical effects of underground nuclear explosions."

22 July. A. van Falkenburg, J. Jamieson, H. G. Drickamer, "Recent high pressure developments."

Chemistry and Metallurgy of Semiconductors

A. J. Rosenberg, *chairman*

25 July. *Crystal growth*: P. Egli, "Zone concept of crystal growth"; D. A. Vermilyea, "Defect mechanism of crystal growth"; R. L. Longini, "Dendritic crystal growth"; F. H. Horn, "High temperature crystal growth."

26 July. *Impurity phenomena*: H. J. Vink, "Non-stoichiometry in semiconductors"; H. Reiss, "Interaction of chemical and lattice defects"; K. Weiser, "Theory of solubility of impurities"; J. B. Mullin, "Anisotropic segregation."

27 July. *Surface chemistry*: C. G. B. Garrett, "Continuum approach to surface reactivity"; H. C. Gatos, "Atomic approach to surface reactivity"; G. Parravano, "Catalytic activity of semiconductor surfaces"; W. W. Harvey, "The semiconductor electrode."

28 July. *Chemical bonding in semiconductors*: W. B. Pearson, "Valence bond approach"; J. B. Goodenough, "Crystal field approach"; A. R. Von Hippel, "The future of molecular engineering."

29 July. *Correlation of physico-chemical and electronic properties*: O. G. Folberth, "Influence of bond type on electronic properties"; J. B. Conn, "Influence of structure on electronic properties."

Solid-State Studies in Ceramics

J. H. Westbrook, *chairman*

Larry Himmel, *vice chairman*

Microstructural Studies in Ceramics

1 Aug. *Geometry*: J. E. Hilliard, "New results in quantitative petrography"; J. C. Griffiths, "Definition of micro and macro scale aggregates."

2 Aug. *Techniques*: H. Pfisterer, "Comparative ceramographic and electron fractographic techniques"; J. J.

Comer, "Methods for studying microstructure with the electron microscope"; G. A. Wolff, "Optical studies of microcleavage, bond character, and surface structure in crystalline materials."

3 Aug. *Origins*: L. H. Van Vlack, "Interfacial energy versus composition of non-metallic phases"; I. I. Kitai-gorodskii, "Crystallization and grain growth in glass and ceramic systems." *Structure versus properties*: J. Gurland, "Relationships between microstructure and mechanical properties"; C. Kooy, "Relationships between microstructure and magnetic properties."

4 Aug. *Structure versus properties (continued)*: D. A. Lupfer, "Effects of macrostructure and microstructure on dielectric properties"; R. C. DeVries, "Morphology of ferroelectric domains in BaTiO₃ crystals." C. S. Beals, "Meteorites and meteorite craters on the earth and moon."

5 Aug. *Structure versus properties (continued)*: C. P. K. Chu, "Microstructural studies on coatings"; F. Ordway, "Relations between properties and structure in cement and concrete."

Chemistry and Physics of Solids: Point Defects

Robert L. Sproull, *chairman*

Robert Maddin, *vice chairman*

8 Aug. J. M. Whelan, "Interactions of holes, electrons, and electrically active impurities in GaAs"; E. M. Pell, "Lithium impurity interactions in silicon"; H. Brooks, "Key problems in the theory of point defects"; G. H. Vineyard, "Information on point defects from radiation damage."

9 Aug. D. Wilsdorf, "Interaction of point defects and dislocations"; M. J. Makin, "Point defects and mechanical properties of metals"; R. W. Balluffi, "Measurements of equilibrium point defect concentrations"; T. Federighi, "The role of point defects in clustering in supersaturated aluminum alloys."

10 Aug. R. M. Walker, "Radiation damage and point defects in metals"; J. S. Koehler, "The nature of point defects in metals"; H. S. Sack, "Review of dielectric relaxation and internal friction." Round table discussion: R. W. Dreyfus, D. O. Thompson, B. S. Berry, and C. A. Wert.

11 Aug. G. D. Watkins, "Study of defects by electron spin resonance"; C. P. Slichter, "Applications of nuclear magnetic resonance"; W. D. Compton, "Optical studies of point defects in insulators"; S. Zwerdling, "Zeeman effect of impurity excited states in semiconductors."

12 Aug. J. H. Crawford, Jr., "Defect formation in ionic crystals by ionizing radiation."

Toxicology and Safety Evaluations

David W. Fassett, *chairman*
Frank R. Blood, *vice chairman*

15 Aug. B. J. Vos, "The interpretation of carcinogenesis experiments"; R. M. Mulligan, "Comparative pathology of human and canine tumors"; John McGrath, "Neurologic diseases of the dog."

16 Aug. Elliott Maynard, "Use of behavioral techniques in a study of heavy metal poisoning"; Thom Verhave, "The analysis of behavioral patterns in experimental animals"; Charles B. Ferster, "Some applications of behavioral analysis"; J. Teisinger, "Application of Pavlov techniques to toxicology."

17 Aug. *Problems in the toxicologic evaluation of new drugs—evaluation in animals* (Fred Coulston, *chairman*): Kenneth Dubois and John Litchfield, "Evaluation in animals." *Problems in the toxicologic evaluation of new drugs—evaluation in humans* (Sidney Farber, *chairman*): Ralph Jones, K. G. Kohlstaedt, Ralph Smith, "Evaluations in humans."

18 Aug. J. Teisinger, "Significance of biological tests for exposure in industrial toxicology"; T. Clarkson, "Biochemical aspects of heavy metal poisoning"; J. Radomski, "Influence of environmental temperature on toxicologic reactions." Henry Hurtig, *chairman*: Simone Dormal, "Experiences with pesticide residue problems in Europe."

19 Aug. Lewis Schanker, "Absorption of foreign organic compounds from the gut"; K. C. Huang, "Excretion of chemical compounds by the kidney."

Infrared Spectroscopy

D. A. Ramsay, *chairman*
M. K. Wilson, *vice chairman*

22 Aug. G. C. Pimentel, *chairman*: L. Couture-Mathieu, "Infrared and Raman spectra in crystals"; J. Fahrenfort, "Infrared reflection spectra"; H. J. Hrostowski, "Electronic absorption of bizarre impurities in silicon and germanium in the infrared region."

23 Aug. B. Crawford, Jr., *chairman*: P. Jaquinot, "Recent advances in the near infrared"; L. Grenzel, "Recent advances in the far infrared"; speaker to be announced, "Recent infrared investigations in Russia."

24 Aug. R. R. Brattain, *chairman*: A. D. Buckingham, "Theory of solvent effects in infrared spectra"; W. B. Person, "Infrared intensities"; A. C. Jones, "Measurement of real Raman intensities."

25 Aug. M. K. Wilson, *chairman*: M. A. Eliashovich, "Molecular vibrations"; J. Overend, "Molecular force fields"; L. J. Bellamy, "Infrared spectra of large molecules."

26 Aug. W. J. Potts, *chairman*: W. Klemperer, "High temperature studies in the infrared"; C. H. Townes, "Progress report on the status of infrared masers."

High-Temperature Chemistry: Kinetics of Vaporization and Condensation Processes

Leo Brewer, *chairman*
Paul W. Gilles, *vice chairman*

29 and 30 Aug. *Effusion studies*: Robert J. Thorn; R. S. Bradley; Thomas E. Phipps; George W. Winslow; K. Douglas Carlson.

30 Aug. *Transpiration studies*: U. Merten.

31 Aug. *Crystal growth and condensation coefficients*: G. W. Sears and J. P. Hirth.

1 and 2 Sept. *Mass spectroscopy and field emission microscopy*: W. A. Chupka; John McKinley; Paul Schissel; Robert Comer.

Forthcoming Events

April

7-9. Optical Soc. of America, Washington, D.C. (K. S. Gibson, OSA, Natl. Bureau of Standards, Washington 25.)

8-9. American Assoc. of University Professors, Detroit, Mich. (P. R. David, Univ. of Oklahoma, Norman.)

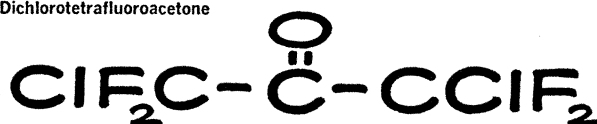
8-9. New Mexico Acad. of Science, Socorro. (K. G. Melgaard, P.O. Box 546, University Park, N.M.)

8-9. Southern Soc. for Philosophy and Psychology, Biloxi, Miss. (E. Henderson, Florida State Univ. Tallahassee.)

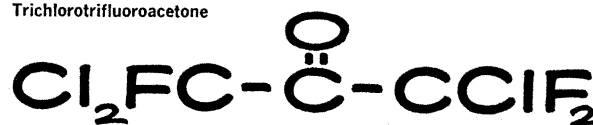
8-11. American Dermatological Assoc., Boca Raton, Fla. (W. M. Sams, 308 Ingraham Bldg., Miami 32, Fla.)

9-10. Histochemical Soc., 11th annual,

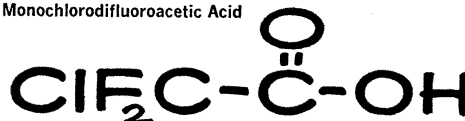
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2. Trichlorotrifluoroacetone
3. Monochlorodifluoroacetic acid

These fluoro organics have demonstrated unusual reactive capabilities which suggest a variety of possible applications including use as complexing agents, catalysts, and raw materials for fluoro-organic synthesis.

The ketones can be hydrated, alcoholated and ammoniated. They are stable in acid but react with alkalis to form derivatives of monochlorodifluoroacetic acid. They form amine and urea com-

plexes and show interesting pyrolytic reactions.

As a starting point for your own investigations, write for our data sheet and technical report on the properties and reactions that mark these fluorine-containing acetones as potentially valuable.

Mail coupon now for data on properties and reactions. Please attach company letterhead.

Product Development Department
General Chemical Division S-30
Allied Chemical Corporation
40 Rector Street
New York 6, N. Y.

Please send data sheet on fluorine-containing acetones ☐

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Name

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GENERAL CHEMICAL DIVISION
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